

REMARKS

The amendments to the paragraphs beginning on pages 8, 14 and 18 insert sequence identifiers (SEQ ID NO:) at appropriate locations in the Specification. The amino acid sequence represented by the signature motif on page 7, paragraph [0023], line 27, and on page 22, line 3, contain only two "specifically defined" amino acid residues, i.e., those which can be represented by other than "Xaa". According to 37 C.F.R. §1.821(a), "...amino acid sequences as used in §§1.821 through 1.825 are interpreted to mean an unbranched sequence of four or more amino acids...Sequences with fewer than four specifically defined...amino acids are specifically excluded from this section. "Specifically defined" means those amino acids other than "Xaa"...defined in accordance with the World Intellectual Property Organization (WIPO) Handbook on Industrial Property Information and Documentation, Standard ST.25: Standard for the Presentation of Nucleotide and Amino Acid Sequence Listings in Patent Applications (1998), including Tables 1 through 6 in Appendix 2...". Therefore, this amino acid sequence does not fulfill the requirements for inclusion in the Sequence Listing.

The amendment to the nucleotide "Consensus Sequence" for Variant 7 of Example 2 on page 31, line 5, corrects an error of a typographical nature made without deceptive intent. The sequence as submitted appears as:

| | | | | | | |
|------------|----------------|-----------------|------------|-----------------|------------|----------------------|
| <u>CAC</u> | <u>G (A/G)</u> | <u>GA (C/T)</u> | <u>ATT</u> | <u>GC (C/T)</u> | <u>GCC</u> | <u>(A/C) G (A/G)</u> |
| H | R | D | I | A | A | R |

The second three-letter codon, encoding "R" or Arg, contains only two nucleotide positions of the three required for amino acid translation. The two member nucleotide sequences from which the "Variant 7" "Consensus Sequence" is derived are SEQ ID NOS:265 and 267.

The codons for the "R" in the "Signature Motif" are underlined in the sequences below:

| | |
|--|------------------|
| aatcacttcatccacagggatattgccgcccggaactgcctgctgagc | (SEQ ID NOS:265) |
| N H F I <u>H R D I A A R</u> N C L L S | (SEQ ID NOS:266) |
| aaccacttcatccaccgagacattgctgccagaaactgcctcttgacc | (SEQ ID NOS:267) |
| N H F I <u>H R D I A A R</u> N C L L T | (SEQ ID NOS:268) |

By inspection, it can be seen that the "agg" and "cga" codons are represented by only the last two nucleotide positions in the consensus sequence, whereas the first position "a" and "c" options are missing. Insertion of "(A/C)" for the first position is justified by their presence in the appropriate positions for the "R" codon in the sequences from which the "Consensus Sequence" is derived. The IUPAC symbol "m" for this position was included in the corresponding sequence entered in the Sequence Listing (SEQ ID NO:296) to account for this insertion. This results in the corrected "Consensus Sequence" as amended, with the inserted options "A/C" for nucleotides in the first position of the second codon with a double underline as follows:

| | | | | | | |
|------------|--------------------|----------------|------------|----------------|------------|--------------------|
| <u>CAC</u> | <u>(A/C)G(A/G)</u> | <u>GA(C/T)</u> | <u>ATT</u> | <u>GC(C/T)</u> | <u>GCC</u> | <u>(A/C)G(A/G)</u> |
| H | R | D | I | A | A | R |

Applicants request entry of this amendment in adherence with 37 C.F.R. §§1.821 to 1.825. This amendment is accompanied by a floppy disk containing the above named sequences, SEQ ID NOS:1-314, in computer readable form, and a paper copy of the sequence information which has been printed from the floppy disk.

The information contained in the computer readable disk was prepared through the use of the software program "PatentIn" and is identical to that of the paper copy. This amendment contains no new matter.

Appl. No. 10/776,399
Amdt. dated June 25, 2004
Reply to Notice to File Missing Parts of May 18, 2004

PATENT

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



Kenneth A. Weber
Reg. No. 31,677

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415-576-0300
Attachments
DLS:dmw
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